GERANIUMS

GENERAL INFORMATION	page	1
NEW GERANIUMS FOR 1958	page	7
WHITE	page	8
WHITE MARKED WITH COLOR	page	8
SHRIMP • PALE SALMON	page	9
SALMON • SALMON-APRICOT	page	10
LIGHT ORCHID PINK • LIGHT ROSE	page	12
ORCHID-PINK • ROSE • PURPLE-ROSE	page	13
ORANGE • APRICOT-ORANGE	page	14
RED WITH WHITE CENTERS	page	15
SCARLET • VERMILLION • RED .	page	16
CRIMSON • PURPLE-CRIMSON	page	17
BLENDS	page	17
FANCY-LEAVED GERANIUMS	page	19
DWARF GERANIUMS	page	24
ODD GERANIUMS	page	28
TERMS INSIDE FRONT	COVE	R
POSTAGE INSIDE BACK	COVE	a P

HOLMES C. MILLER 280 WEST PORTOLA AVENUE LOS ALTOS, CALIFORNIA



MARCH • 1958

PLEASE READ BEFORE ORDERING

Terms

All sales are cash. No C.O.D. orders are accepted.

Orders for less than \$2.00 cannot be accepted. This
amount is for the plants only. Postage is extra.

4% Sales Tax must be included on all orders to be delivered in California.

Prices do not include postage. Shipments are made by Insured Parcel Post, Special Handling, unless otherwise ordered. Postage must be included with orders at the rates given on the inside back cover. Other information on shipping is given on page 2.

Special Delivery costs 25c extra. It is recommended to any address where the service is available.

All plants are specially grown for shipment, and are carefully packed. I have no control over the plants after they are shipped, and I do not accept any responsibility for damage or loss in transit or after delivery.

Orders for shipment outside of the continental limits of the United States cannot be accepted.

Substitutes

When varieties are out of stock, I can usually supply equally good, or even better, varieties. It is to your advantage, as well as mine, to allow me to substitute, or to give a list of second choice varieties. If it is necessary to substitute, I always give extra value. Substitution is not made unless authorized in the order. A refund is sent if substitution is not authorized, or if suitable substitutes are not available.

HOLMES C. MILLER 280 West Portola Avenue, Los Altos, California.

A PINTO TAG NURSERY. Shipments to most places in California do not require inspection and are delivered without delay.

GENERAL INFORMATION

Introduction

This catalog is concerned exclusively with Zonal Geraniums, also called Garden Geraniums. I do not grow Ivy, Lady Washington, or Scented Geraniums. The Zonal Geraniums comprise the botanical group Pelargonium hortorum of Bailey. They are derived from the blending of various forms of P. zonale and P. inquinans, with the addition, in some cases, of crosses to the Ivy Geraniums, P. peltatum and P. lateripes. DARK BEAUTY is presumably a form of P. frutetorum, closely related to P. zonale.

The geraniums offered in this catalog have been selected as the best and most interesting from trials of thousands of old and new varieties. Each one is reasonably distinct from any of the others. Many are scarce or new, and hard to find elsewhere. This is a list of the finest and most unusual Zonal Geraniums for those wanting the best, and something out of the ordinary.

Standard and French Types

The Zonal Geraniums consist of two distinct races, the Standard Type, and the French Type, sometimes called Bruant Type.

The Standard Type is the original race of Zonal Geraniums, whose development dates back to the introduction into England in 1710 and 1714 of Pelargonium zonale and P. inquinans. The majority of geraniums grown today are of the Standard Type. Typical well-known examples are Mrs. Lawrence, Maxime Kovalevski, and Pride of Campen.

The French Type apparently originated from the Standard Type in France about 1880. The French Type differs from the Standard Type in many respects. The French Type is more vigorous, with larger, rougher, and more sharply toothed leaves, larger stems, and, on the average, larger and more irregular flowers on much heavier stalks. The petals are heavy and firmly attached, making the flowers very durable, which, with the robust habit, makes the French Type ideally suited for outdoor planting. They are also excellent for pot plants, flowering well even when small. They are good window plants, although some varieties eventually get too large. The exceptional lasting qualities of the flowers make them especially suited for cut-flower and corsage use. They will not cross readily, if at all, with the Standard Type. Typical French Type varieties are Alphonse Ricard, Madame Jaulin, and Mrs. E. G. Hill.

The Standard Type and the French Type are listed separately in each Color Group.

Size of Plants

All varieties are available as strong, well rooted plants from 2½-inch pots. These plants are specially grown with heavy root systems and moderately hard tops so that they ship well and readily adapt to new conditions. The heights of the plants vary with the varieties and with the stocks on hand. All plants are flowering size, and most of them are in bud or flower when shipped. Each plant is labeled with the variety name, and is guaranteed to be true to name as described in this catalog.

Seeds, cuttings, or other sizes of plants can not be supplied.

Ways of Shipment

Most shipments are made by Insured Parcel Post, Special Handling. Generally this is the best way to ship. It is convenient, inexpensive, and fast. Shipments arrive about as quickly as First Class Mail. Insurance covers total loss of the package, damage due to unreasonable delay, and damage due to excessively rough handling, but does not cover damage due to overheating or freezing unless it can be shown that there was negligence in handling in transit. Orders to be shipped by Insured Parcel Post, Special Handling, must include postage as given by the schedule on the inside back cover of this catalog.

Special Delivery may save a full day in transit time to any address where Special Delivery service is available. It is well worth the additional cost of 25c per package. It is often worth the cost to addresses where the service is not available, since it assures that the package will be handled as quickly as possible.

Air Parcel Post is fast, but too expensive to be justified in most cases. It is worthwhile for long distance shipments of some of the more expensive Dwarf Geraniums. Shipments clear across the country often are delivered within 24 hours, and arrive as fresh as when packed. The schedule of rates on page 27, under Dwarf Geraniums, also applies to all other varieties.

Transportation problems, and special plant import regulations make it difficult to deliver plants outside of the continental limits of the United States at reasonable cost, so orders for such delivery are not accepted.

Effects of Shipping

For years I have shipped safely to all parts of the country. Naturally, plants which have been shipped long distances do not arrive quite so fresh as they were when packed, but the damage is seldom serious.

Plants that are in transit three days, or less, usually show no effects of shipment except a little rumpling of the leaves and an occasional broken flower stalk.

Plants that are in transit five or six days may show some yellowing of the lower leaves. This is more likely to occur, and is more likely to be severe, in hot weather. There may also be blighted flower buds. It is normal for the plants to seem to get worse for a few days after they are unpacked. Often some leaves are lost. This sort of damage is not so serious as it appears. Usually the plants leaf out quickly, and generally are bushier than they would have been if they had not been damaged.

I do everything that I can to insure that the plants arrive in good condition. The plants are shipped in the soil in which they are grown, and are carefully packed in strong cartons. Shipments are scheduled so that they will not be delayed by Sundays or other holidays. Because I have no control over the treatment of the plants in transit and after delivery, I can not accept any responsibility for damage or loss in transit or after arrival.

While I can not usually deliver plants clear across the continent looking as fresh as ones from a local florist, I can supply varieties that can not be obtained locally, and I believe that my stock, specially grown for shipment and adaptability to new conditions, inspected and approved for shipment by the State of California, is as good as can be obtained anywhere and will give satisfaction.

Geraniums in the Garden

Geraniums will thrive outdoors in any reasonably well drained garden soil. The soil need not be rich. Rich soil tends to encourage leaf growth at the expense of flowers. Established geraniums will give good results with little care, but, like all plants, will respond to good care with larger and finer flowers. For best results, the soil should never be allowed to become really dry. Geraniums are good foragers, and outdoor plants will not often need fertilizing. When fertilizer appears to be needed, the applications should be rather small. Geraniums can compete successfully with heavy-feeding shrubs and trees, such as privet and acacia, and can make a good showing where other flowers fail. Geraniums are sun-loving and will do well in full sun in any climate. However, in climates where the summer sun is intense the flowers will be larger and finer if they have shade during the middle of the day, but they must have some sun. Geraniums will not flower unless they have enough sun. They will stand a little frost, but will be damaged or killed if exposed to temperatures below 26° F.

It is best to set the plants a little deeper in the soil than they had been growing, but not so deep that any of the leaf stalks are buried. The soil should be pressed very firmly around the root ball. The first watering must be heavy enough to soak all of the soil, both new and old. It will be necessary to water frequently until new roots have grown out into the surrounding soil.

The choice between single and double flowered varieties is mostly a matter of personal preference, but there are differences in performance in the garden that deserve consideration. The double flowered varieties withstand wind and rain much better than most of the singles. They are at their best in moderately warm weather, but often produce small or distorted flowers under cool conditions. When the weather is generally cool, it is often is in the Pacific Northwest, or in California in winter, the single flowered varieties will give better performance. This, no doubt, accounts for the popularity of the singles in these areas.

Geraniums make excellent cut flowers, lasting a long time. In any area with a reasonably long growing season it is well worthwhile to grow a few plants just for cut flowers. The double flowered varieties last best, but the singles are mostly very satisfactory too.

Geraniums in Pots

Geraniums in pots do best if the pots are small for the size of the plants. Geraniums will grow into fairly large plants, actually small shrubs, if they have root room. They will stay smaller and flower much more freely if kept potbound. A 4-inch pot is large enough for indoor plants. Larger pots may be used on porches or terraces if the plant is large enough for the pot. Never put a small plant in a large pot, but change sizes by stages as the plant grows.

Potting soil for geraniums should be of a texture to give good drainage and aeration, but of sufficient body to allow firm potting. Ideally it should be slightly acid, about pH 6.0-6.5, but good growth can be had over a range of pH 5.5 to pH 7.5. Most potting soils fall in this range.

A wide variety of soil mixtures have been recommended and used successfully for geraniums. Apparently the preferences and habits of the grower are as important as the requirements of the plants. Any soil that gives good results is a good soil, and in such cases there is not much point in trying other mixtures. Actually the soil mixture is not at all critical. Rather heavy soils with a low proportion of organic material are generally considered best for geraniums. Such simple mixtures as 2 parts garden soil and 1 part coarse sand, or 3 parts garden soil, 1 part coarse sand, and 1 part peat moss are good. The amount of sand to use depends upon the quality of the garden soil. The suggested amounts are for a medium heavy clay loams, less with lighter soils of small clay content. The soil should be a little moist when potting. It is difficult to pot properly with soil that is either too dry or too wet.

Geraniums that are to be grown in pots will do best if put into 3-inch pots when received. When they are well established in these pots and have made good growth they can be shifted to 4-inch pots.

Before potting a little soil should be scraped from the top of the root ball to remove any moss or algae on the surface, and a little soil should be crumbled from the top and bottom shoulders of the ball to loosen some of the roots. If the soil is dry and hard, it can be moistened a little for this operation, but care should be taken that the soil does not become so wet that the ball falls to pieces. The plants should be potted a little deeper than they were grown, but no leaf stalks should be buried. The potting should be firm. A small stick may be used to tamp the new soil around the original ball. The finished soil level should be about ½ inch below the rim of the 3-inch pot. The first watering must be thorough enough to soak all of the soil, both new and old. If the water runs through very rapidly, more water should be given, so that it is certain that all of the original soil is wet.

Potted geraniums usually can not be watered on a fixed schedule. They should be watered only when water is needed. They use lots of water when they are growing

well under favorable conditions. It is best to water geraniums thoroughly when they are watered, and to allow the soil to get moderately dry before watering again. Geraniums usually do not wilt when they are too dry, so that it is necessary to judge moisture by the appearance and feel of the soil. Serious damage may occur if the soil is allowed to get too dry. Such damage appears a day or two later with a sudden yellowing (and eventual loss) of the lower leaves. In extreme cases, all of the roots and the lower part of the stem may be killed. Such plants continue to grow at the top for a time, but eventually rot at the base. Such losses are often attributed to over-watering, but the real cause is over-drying. Young plants, and some of the Fancy-Leaved and Dwarf varities are most easily damaged by lack of water. The soil in small pots dries out quickly. The plants should be looked at often. If the soil is nearly dry, or seems likely to become nearly dry before the next inspection, the plants should be watered. Watering from the top of the soil is better and easier than watering from below. Enough water should be given so that a little drains through the pot. Water should not be allowed to remain in a saucer under the pot.

Geraniums do best in a cool soil. In summer the pots should be shaded from sun. One way to do this is to set the potted plant in a pot one or two sizes larger, so that there is a shaded air space between the two pots.

Usually the common red clay flower pots are best for geraniums, since they provide good aeration and cool soil. In locations where the plants dry out very quickly, glazed pots help to retain moisture. Either kind of pot can be used successfully anywhere, but the watering has to be adjusted to allow for the difference in evaporation loss.

Potted Geraniums will need fertilizer sooner or later. Need of plant food is indicated when the leaves are a paler green than normal and the flowers are smaller than usual. It is best to use one of the "complete" or "balanced" fertilizers. Many good ones are available. Vigoro (6-10-4) is satisfactory. It is easy to place the required amount of this on top of the soil to water in. Recommended doses are a small pinch for a 2½-inch pot, ¼ level teaspoonful for 3-inch, ½ to ¾ level teaspoonful for 5-inch, and 1 heaping teaspoonful for 6-inch. These applications should be made only as often as needed, and not oftener than once a month unless the need is very evident. Too frequent or too large applications may damage or kill the plant. Other brands of fertilizer may be stronger or weaker, and the instructions of the maker should be followed. There are now available a number of fertilizers which are dissolved in water and applied as liquid. These are convenient and good. The maker's instructions should be read carefully, since these fertilizers are generally quite strong. It is often best to use smaller doses than are recommended for these fertilizers, since geraniums are better when not fed too richly.

Winter Flowers Indoors

Geraniums have no natural dormant period, and will flower the year round if suitable conditions are provided. The dry air of heated homes, so hard on many kinds of plants, is good for geraniums. Moderate humidity is beneficial, but not necessary. High humidity encourages diseases. Good ventilation is essential. Geraniums are temperate climate plants, with ideal temperatures at about 60° F. to 70° F. during the day, and about 15° F. lower at night. They will tolerate large fluctuations of temperature, but will not do well if forced at continuous high temperatures. They are not tropical plants, and do not do well under the humid, warm, and shady conditions required by such plants.

Geraniums need lots of light. For good winter flowering in the house, they ought to be in a window with a southern exposure, as close to the glass as possible, but not with the leaves touching the glass. When established plants fail to flower, it is a sure indication that they are not getting enough sun. It is not always possible to get really enough sun indoors during the short, dull days of December and January, particularly in cities, where smoke and steam may weaken the light. Even under these conditions, some flowers can be expected if the plants are in a window with an open south exposure.

Some varieties flower better than others under conditions of limited amount of sun. Not very much seems to be known about the relative merits of different varieties, and opinions differ. Some varieties are mentioned in this catalog as being good in winter. Most of the varieties described as good pot plants, or as very free flowering, or as small and slow growing, are likely to be good for winter flowering. Although the French Type varieties in general grow into rather large plants, most of them flower well when still small, and some of them are very good for winter flowering. Among the best are all of the Fiat varieties, and the Fiat hybrids, Fireglow, Inspiration, and Welcome.

Geraniums in pots flower most freely when somewhat potbound, with the growth slowed down, and the stems beginning to harden. This is particularly important for winter flowering. This means that plants to flower in 4-inch pots in December and January should be in those pots by the first of October, or even earlier. If this can not be done, it is better to keep them in 3-inch pots. In fact, since more 3-inch pots will go into a given space, the smaller plants may give a greater total quantity of flowers. If any pinching or pruning of the plants is to be done, it ought to be finished at least two months before flowers are wanted.

The Semi-Dwarf Geraniums are especially good for window plants. In 4-inch pots they grow fairly quickly into compact, bushy, floriferous plants with about an 8 inch height and spread, and increase in size slowly thereafter, keeping an attractive size and habit for several years with only ordinary care.

Old Catalogs Wanted

I am trying to get together a collection of old catalogs listing Zonal Geraniums, particularly catalogs, either domestic or foreign, issued before 1930. If you have any that you are willing to sell, please write to me. I shall be glad to buy any that I do not have already.

NEW GERANIUMS FOR 1958

GALA. (Miller). Double. Purple-crimson with white center. Very large flowers and clusters. Free flowering, medium to tall plant. Flowers are of ideal double form with the rich color of the single variety, BOUGAINVILLEA. Outstanding. \$1.50

HARVEST MOON. (Miller). Single. Apricot-orange with small white center. Very large flowers of fine round form in large clusters. Sturdy, bushy plant of medium size. Very showy. \$1.50

SHIMMER. (Miller). Double. Soft apricot with white center. Very large flowers produced freely in large clusters. Bushy, small to medium size plant. A lovely variety. \$1.50

Dwarf Geranium

SMALL FORTUNE. (Miller). White, edged and flecked with pink. Good size flowers and clusters in abundance on a very bushy, dwarf plant with small, dark olive-green leaves. A handsome, easily grown, dwarf variety. \$1.50

Flowering Geraniums by Color Groups

WHITE

Standard Type

GARDENIA. (Miller). Double. Satiny white. Compact, bushy plant, particularly adapted for pot growing. Very free flowering. Texture and form of flowers different from the other double white varieties. 50c

STARLIGHT. Single. White. Very free flowering, small plant of rather slow growth. Particularly good as a pot plant. L'AUBE, SNOWDROP, and SNOWFLAKE are all somewhat like STARLIGHT, but none is quite so good. 50c

VERITE. Double. White. Large flowers, considerably larger and finer than Madame Buchner. The free flowering plant is also larger. Verite is also called Springfield White. Very good. 50c

WHITE MAGIC. (Miller). Semi-double. Pure white. Very large, beautifully formed flowers in graceful clusters. Very free flowering. Bushy, small to medium size plant, particularly good for pots. White Magic is the first really large flowered white geranium. No geranium has greater beauty and grace. 75c

French Type

SUMMER CLOUD. (Miller). Semi-double. Open flowers consistently white; buds sometimes a little pink. Large flowers and clusters. Vigorous, compact, free flowering plant, fine for either pots or garden. 75c

WHITE VARIOUSLY MARKED

WITH COLOR

Standard Type

ALWAYS. (Miller). Double. Cream-white somewhat flushed soft shrimp, deeper in the center. Large flowers of beautiful form in large clusters. A free flowering, bushy plant. The color is best indoors or in part shade outdoors. Very good for either pots or garden. 50c

CANADIAN PINK AND WHITE. Double. White with a distinct rose-red margin. Tall, strong plant. 50c

ECSTASY. Single. Cream-white, very lightly flushed pink with pale coral "Phlox eve". Large flowers in good clusters. Free flowering. The intensity of the color varies considerably, being most delicate indoors or in shade. A beautiful variety. 60c

FORTUNE. (Miller). Double. White with rose-red edging and some rose-red flecks in other parts. Amount of color variable. Large flowers in large clusters. Free flowering, medium size, bushy plant. FORTUNE is good either in pots or garden. 50c

JOY. (Miller). Double. White, margined and flecked salmon-apricot. Some flowers are almost white with a delicate edging of salmon-apricot, others are variably flecked with color, sometimes over all but the center. These variations depend upon growing conditions, principally the temperature and the amount of sun. The flowers are large and well formed on a free flowering, small plant. Joy is a beautiful and interesting variety. 50c

LIGHT PAINTED LADY. Single. White with narrow rose-red margin. Medium size, free flowering plant. Much like Carmel but the flowers are a little larger and more consistent in color, and the plant is more reliable. 50c

NEW PHLOX. (Miller). Single. White with bright vermilion eye in the center. At times the white will have a suffusion and veining of pink. Well rounded, long lasting flowers in large clusters. Medium-tall plant. Exceptionally free flowering both indoors and out. Very popular. 50c

French Type

INSPIRATION. (Miller). Semi-double. Cream flushed with light salmon or shrimp. Very large flowers in medium clusters. A comparatively small plant for the French Type, and useful for pots as well as in the garden. Very free flowering. The flowers are excelent for bouquets and corsages, the buds being particularly beautiful. I consider this the finest light colored variety in the French Type. 75c

MADAME JAULIN. Semi-double. White to pale warm pink, somewhat deeper in the center. Large, cupped flowers. Vigorous, bushy plant which flowers abundantly. The color is nicest in part shade. Sometimes called APPLE BLOSSOM. 50c

IVORY-PINK • SHRIMP

• PALE SALMON

Standard Type

DAWNFLUSH. (Miller). Single. White veined and flushed with soft salmon, deeper in the center. Well rounded flowers in large clusters, lasting exceptionally well. Varies considerably; quite uniform salmon in warm weather, almost "Phlox" type in cool weather. Very free flowering. 50c

DELIGHT. (Miller). Single. Light salmon. Very large, nicely shaped flowers in good clusters. The color deepens slightly toward the center, with some tendency to produce a "Phlox" eye in cool weather, but most of the time the color is quite uniform. The plant is healthy, compact, and bushy. It is very free flowering, and the flowers last well. Delight is especially good as a pot plant, but is strong enough to use for bedding also. 75c

HONEYMOON. Single. Pale shrimp margin shading to apricot-salmon center. Very large flowers. Bushy, free flowering plant. Quite variable, but always good. 60c

MRS. NELSON EDDY. Single. Ivory-pink to light shrimp. Large clusters. A very fine, soft color, lightest indoors. 50c

SUNSET. Single. Light salmon, somewhat darker in the center. The large flowers have a crape effect that is attractive. Free flowering plant of medium to strong growth. Good. 50c

French Type

FIAT ENCHANTRESS. Double. Light shrimp, often much lighter at the edges. Large flowers on a compact, bushy, free flowering plant. Good either in pots or garden. 50c

FIAT SUPREME. Double. Soft shrimp. Large flowers. Compact, bushy plant that is very free flowering. Beautiful color. I consider this the finest of the "FIAT" varieties. 50c

PRINCESS FIAT. Double. Soft shrimp, margins nearly white. Large flowers with the edges of each petal toothed. Compact, bushy plant. Very floriferous. A fine addition to the Fiat family. 50c

ROYAL FIAT. Double. Soft shrimp, often lighter at the margins of the petals. Large flowers with the edges of each petal toothed. Compact, bushy, very floriferous plant. The finest of the "Carnation Flowered" FIAT varieties. 75c.

SALMON • SALMON-CORAL

• SALMON-APRICOT

Standard Type

CHEERIO. (Miller). Single. Salmon-apricot to salmon coral with white center. Free flowering plant of medium growth. Attractive. 50c

CORALGLOW. (Miller). Semi-double. Coral with white center. Very large flowers produced freely. Medium to large plant requires warmth and extra feeding for best results. 50c

DREAMS. (Miller). Double. Soft salmon-coral. Large flowers with a fine waxy quality. Free flowering. One of my best hybrids. Very popular. 50c

EMILE ZOLA. Single. Salmon-apricot. Large, long-lasting flowers of fine round form with good substance. Large clusters. The flowers are just about perfect in color, form, and quality. The color is deepest in warm weather. The plant requires extra care, does not branch very freely, but produces a constant succession of the beautiful flowers. 60c

FESTIVAL. (Miller). Double. Salmon-apricot. Medium to large flowers in good clusters. Exceptionally free flowering plant of good habit. An appealing color. 50c

FLARE. (Miller). Single. Salmon-coral to salmon-scarlet. Very large flowers. A vigorous variety that flowers exceptionally well. I consider it very good. 50c

FRED BEAN. Single. Light salmon-coral. Very large flowers, often measuring 2½ inches across. The very large flowers and the beautiful, waxy color make it deservedly popular. 50c

GERTRUDE. Single. Soft salmon-coral. Large clusters. Free flowering, compact plant, good for pots. 50c

IRMA. Double. Salmon-apricot with some white in the center. Different from other geraniums. Possibly a hybrid with *P. acetosum*, 50c

LADY OF SPAIN. Single. Soft coral with white center. Large flowers in good clusters. Large plant. Different and very good. 50c

LULLABY. Double. Salmon-apricot. Medium size flowers freely produced by a compact plant. Color varies, being richest in warm weather. Good for pots. 75c

LUSTER. (Miller). Single. Salmon-coral, often lightly flushed with violet. Large, fine, round flowers produced freely on a small to medium plant. Usually at its best in winter. 50c

MONTEREY. Double. Soft salmon-coral marked with deep coral, with white center. Backs of petals much lighter. Large flowers in large clusters. The flowers do not consistently open full and flat. When it is at its best, it is one of the most beautiful geraniums, well worth a little extra care. It is easier to get perfect flowers indoors than outdoors. 50c

SHIMMER. (Miller). See New Geraniums for 1958, page 7.

SHOWPIECE. (Miller). Semi-double. Soft apricotcoral, center lighter, sometimes white, some petals with darker mottling at times. Very large, showy flowers in medium size clusters. Medium to large plant. Showpiece requires warmth and extra feeding for best results.

TREASURE. (Miller). Double. Soft salmon-apricot. Large, beautifully formed flowers in large clusters. The color varies with growing conditions, and is deepest and best in warm, sunny weather. The small plants grow rather slowly and flower heavily. Treasure is a fine pot plant, and is also good outdoors in either full sun or light shade. The older flowers hold their color well, or even improve in color as they age. 75c

French Type

BLOSSOMTIME. (Miller). Semi-double. Soft salmon-coral. Very large flowers. The color varies with the seasons but is always soft and pleasing. The large, strong plants flower well, even when small. BLOSSOMTIME is a sturdy and attractive variety for any situation. 50c

FIAT. Double. Salmon-coral. Large flowers. Compact, bushy plant. Very free flowering. One of the best geraniums for either pots or garden. 50c

FIAT QUEEN. Double. Salmon-coral. Large flowers with the edges of each petal toothed. This sport of Fiat has the same color and good qualities, and seems to be even more floriferous. 50c

SALMON SUPREME. Semi-double. Light salmonapricot. Very large flowers. Bushy plant that is very free flowering. Fine for pots or bedding. This is one of my favorites. 50c

WELCOME. (Miller). Double. Salmon-coral to salmon-apricot, the apricot tone appearing in warm weather. Large flowers and clusters. Free flowering, compact, sturdy plant with handsome foliage. Good either in pots or garden. The flowers are somewhat cupped, like those of MADAME JAULIN, one of the parents. 50c

LIGHT ORCHID-PINK • LIGHT ROSE • PHLOX-PINK

Standard Type

HELEN VAN PELT WILSON. Single. Light orchidpink to soft phlox-pink with white center. Medium-large flowers. Good clusters on a plant of moderate growth. 50c

MARIA WILKES. Double. Light pink with slight orchid shadings and some white in the center. Large flowers. Plant of moderate growth. Good. 50c

MEMORIES. (Miller). Semi-double. Pale orchidpink with some white in the center. Very large flowers. An extremely free flowering, compact, bushy plant. 60c

PINK PEARL. (Miller). Double. Light pink or very pale rose, with some white in the center. Free flowering, bushy plant. PINK PEARL is lighter in color than any other in this group, and retains this color under all conditions. Fine for pots. 50c.

REVERIE. (Miller). Double. Light orchid-pink with some white in the center. Large flowers in fine clusters. Very free flowering. Strong, compact plant. 50c

French Type

DEBONAIR. (Miller). Semi-double. Light orchid-pink, with a little white in the center. Large flowers in very large clusters on stiff stalks. Free flowering, strong, large plant. 50c

ORCHID-PINK • ROSE

• PURPLE-ROSE

Standard Type

ANN SOTHERN. Single. Purple-rose shading to white center. Free flowering, medium to tall plant. Unusual and attractive color, different from any other variety. 50c

CALIFORNIA BEAUTY. Semi-double. Rose with white center. Large flowers. Compact, bushy plant. Exceptionally free flowering. 50c

FANTASY. (Miller). Single. Purple rose with white center. Large flowers in large clusters. Medium to large, very free flowering plant. Fantasy is different from any other geranium. One of the best for winter flowering. 50c

FRANCES PERKINS. Semi-double. Rose with white center. Large flowers. Larger flowers and plant than CALIFORNIA BEAUTY. 50c

GERTRUDE PEARSON. Single. Rose with white center. Large, well formed flowers. Compact, free flowering plant. Good for pots. It is probable that this is the original form of this old variety. Much of the stock in the trade at present is probably not the true variety. 50c

MULTICOLOR. Single. Flowers open pale pink, and gradually change through rose to old rose. Large flowers in very large clusters that last well. Very free flowering, small to medium size plant. Different and very attractive. 75c

OLD ROSE. (Miller). Semi-double. Soft rose (light old-rose) with some white in the center. Large flowers. Bushy plant of moderate growth. Free flowering. A beautiful, soft color. Fine for pots. 60c

PATIENCE. (Miller). Double. Purple-rose with white center. The large, well formed flowers are freely produced on a medium size plant that branches well. The flowers of PATIENCE are a little bluer than those of any other geranium that I have seen, but, of course, are not true blue, but purple-rose. 50c

PERSIAN ROSE. Single. Purple-rose with a slight amount of white in the center. A free flowering, compact plant of rather slow growth. 50c

PINK BARNEY. Double. Deep rose with a white center. Compact, free flowering plant. 50c

SERENADE. (Miller). Double. Rose to coral-rose. Free flowering plant of good habit. Seems to be an unusually good winter flowering variety. 75c

SHIRLEY SUMMERS. Double. Rose, with the edge of each petal clearly scalloped with white. Some white in the center. Occasional flowers all rose or all white. Very free flowering, small, bushy plant. One of the few geraniums with variegated flowers. Distinct and pretty. All plants have flowers true to type when shipped. \$1.00.

French Type

CALIFORNIA GIANT. Semi-double. Rose with white center. Very large flowers and clusters, produced freely. A rather large plant, but grows slowly. I offer an especially good strain of this variety. 75c

LAVENDER RICARD. Semi-double. Deep orchidpink with white center. Very large flowers in large clusters. Strong growing plant. Popular. 50c

MONSIEUR EMILE DAVID. Double. Purple-rose with a little white in the center. Large flowers. Strong, open plant. One of the bluest geraniums, although, of course, not really blue. 50c

ORANGE • APRICOT-ORANGE

Standard Type

AUTUMN. (Miller). Double. Apricot-orange with white center. Large flowers and clusters. Free flowering, medium to large plant. Needs to be kept well fertilized for best performance. When grown outdoors it is best with some shade. The fine flowers are good for cutting, and are particularly beautiful in artificial light. Makes a good pot plant. 50c

BRAVO. (Miller). Double. Apricot-orange with a white center. Very large flowers and clusters. Medium size plant. The flower color of Bravo is exactly the same as that of the fine variety Halloween, but both the flowers and clusters are larger. I consider Bravo a real improvement on Halloween. \$1.00

GLEAM. (Miller). Double. Soft apricot-orange. Large flowers in good clusters. The color is almost identical to Lave, but the flowers are much larger and better formed, and the plant is of better habit. Very fine. 75c

GLORY. (Miller). Double. Orange with a small white center. Very large flowers. Small to medium, slow growing, free flowering plant, particularly good as a pot plant. Although the plant is not strong, the flowers are so good in form and color that GLORY is outstanding. 75c

HALLOWEEN. (Miller). Double. Apricot-orange with a white center. Large flowers and clusters. Exceptionally free flowering. Medium size plant of good branching habit, suited to either pot or garden culture. I consider HALLOWEEN the best white-centered orange-flowered variety for general use, either indoors or out. 75c

HARVEST MOON. (Miller). See New Geraniums for 1958, page 7.

INDIAN SUMMER. (Miller). Double. Soft apricotorange with white center. Large flowers and clusters. Free flowering, tall plant. Indian Summer is lighter and softer in color than AUTUMN, and a little lighter than HALLOWEEN. 50c

NOUVELLE AURORE. Single. Apricot-orange with white center. Large flowers in fine large clusters. Plant requires extra care to keep it growing well. A beautiful variety and quite distinct. 75c

TANGO. Single. Orange. Large flowers in large clusters. Strong growing. Softer and larger flowers than MAXIME KOVALEVSKI. 50c

TOKEN. (Miller). Single. Orange. Large flowers of good, fully rounded form. Medium size, bushy, free flowering plant, with attractive foliage. 50c

French Type

ORANGE RICARD. Semi-double. Orange to orange-scarlet. Very large flowers. Large, strong plant. Very good. 50c

SCARLET AND RED WITH WHITE CENTERS

Standard Type

ALICE OF VINCENNES. Single. Soft red shading through pink to white center. Large, well formed flowers. Somewhat variable coloring. One of the best in this group. Flowers well in winter. 50c

DOUBLE DRYDEN. Double. Red with white center. Large flowers. Free flowering, strong plant. 50c

HOLIDAY. (Miller). Single. Rosy red with large white center. Very large flowers and clusters. The plant is medium to large size, and branches well. HOLIDAY flowers freely, and is very showy either in pots or in the garden. 50c.

PAINTED LADY. Single. Red with white center. Medium size plant is consistently free flowering. Good for pots or garden. 50c

RADIANCE. (Miller). Double. Salmon-red to vermilion with white center. Large flowers in very fine clusters on a strong free flowering plant. The color varies somewhat, sometimes taking on a coral tone. Showy variety. 50c

SOUVENIR DE MIRANDE. Single. Red shading to large white center. Large flowers that last exceptionally well. Very free flowering, compact plant. Fine for pots. Flowers well in winter. There is some doubt whether this is the original SOUVENIR DE MIRANDE, produced in 1886, and the first of this group. Early descriptions are contradictory and unsatisfactory. Some growers prefer to call this variety Harriet Ann. 50c

SPRINGFIELD SCARLET. Double. Deep scarlet-red with white center. Very large flowers. Deeper in coloring than Jules Vasseur. 50c

There are no French Type geraniums in this color group.

SCARLET • VERMILION • RED

Standard Type

AZTEC. (Miller). Semi-double. Deep vermilion with golden-tan overtones. Medium to large flowers in good clusters. Fairly bushy plant with a tendency to produce some long, more-or-less trailing stems. A little pruning will keep it bushy and compact, if desired. Exceptionally free flowering. 50c

DOROTHEA LOUISE. (Miller). Single. Intense red with small, but very distinct, white eye. Small, slow growing plant that is very floriferous. Useful for pots. 60c

FLAME. Single. Intense scarlet. Very large flowers. A brilliant variety. 50c

LA FIESTA. Single. Orange-scarlet. Large flowers with slightly ruffled effect. A general favorite. 50c

PAUL SLOAN. Single. Vermilion. Large flowers of good form in large clusters. Fine color, different from any other. 50c

PRIDE OF CAMDEN. Double. Velvety red. Very free flowering, fairly compact plant. Very much like ALEXIAN BEAUTY and S. A. NUTT, but seems to be a little better than either. 50c

French Type

COLORADO AGGIES. Semi-double. Scarlet to orangescarlet. Very large flowers in good clusters. Large plant. A very showy variety on the order of ALPHONSE RICARD, but better. 50c

E. H. TREGO. Double. Intense red. Very large flowers. Medium size plant with some tendency to trail. Probably has Ivy Geranium ancestry. Very fine flowers. Also called LOUISE. 50c

FIREGLOW. (Miller). Double. Soft but vivid orange-scarlet. The large flowers have some of the petals twisted and curled giving an interesting informality. Free flowering, strong plant. 50c

GALLANT. (Miller). Semi-double. Scarlet. Very large flowers in fine clusters on a strong growing plant. Consistently larger flowers and richer color than ALPHONSE RICARD, with the plant slightly smaller and more compact, and possibly more free flowering. I consider GALLANT very fine. 50c

MADAME CHAS. POMARET. Single. Scarlet. Very large flowers. Large plant. Showy. 50c

MISSOURI. Double. Scarlet-red. Large flowers in large clusters on a bushy, free flowering plant. Fine for pots, window boxes, or gardens. 50c

CRIMSON • CERISE-CRIMSON

• PURPLE CRIMSON

Standard Type

A. M. MAYNE. Double. Rich, deep purple-crimson. Large flowers. Fine, rich coloring. Also called Springfield Violet. 50c

BEAUTY OF CHATSWORTH. Single. Cerise-crimson. Large, nicely formed flowers. The color is variable, but always good. Also called California. 50c

BERKELEY RASPBERRY. Single. Rich red with slight crimson tone. Very large, well formed flowers in large clusters. Medium to large plant flowers well. 60c

BOUGAINVILLEA, (Miller). Single. Purple-crimson with white center. Large flowers. Distinctive and very popular. 50c

GALA. (Miller). See New Geraniums for 1958, page 7.

GAUDY. (Miller). Single. Rich, deep purple-crimson with burnt-orange at the base of the upper petals. Free flowering with large clusters. 50c

GYPSY. (Miller). Double. Deep, rich crimson with a small white center. Large flowers on a medium to large plant. GYPSY has a deeper and richer crimson than any other double flowered geranium. The color is particularly striking because of the white center. 50c

MARQUISE DE MONTMORT. Double. Purplecrimson, often with a little white in the center. Medium size plant. Especially good for winter flowering indoors. 50c

RUBY. Double. Crimson-red with ruby tones. The large clusters are produced on long slender stalks. Good color. The variety called New Ruby seems to be identical. 50c

French Type

MY BEAUTY. Double. Rich crimson. Large flowers. Medium-large plant. This is similar to Marquise de Castelane, but the flowers are more double and livelier in tone on a more compact plant. 50c

WILL ROGERS. Single. Deep crimson, approaching deep purple-crimson on the lower petals and intense scarlet at the base of the upper petals. Large flowers in large clusters, on a large, strong plant. Very rich in color, and perhaps the darkest of all geraniums. 50c

BLENDS

Standard Type

AFTERGLOW. (Miller). Single. Salmon and oldrose blend. Large clusters. The salmon tones predominate in the opening flowers, gradually changing to oldrose in the older flowers. 50c BONANZA. (Miller). Double. Rose and salmon blend, an unusual color. Very large flowers and clusters, on long stalks. Medium to large plant. Very showy. 75c

CHALLENGE. (Miller). Double. Very srtiking blend of vermilion and crimson with a white center. Large flowers on a free flowering, medium size plant. Flower color varies considerably with temperature and light, and often shows russett, orange, or maroon overtones. Very unusual in color, and highly recommended. \$1.00.

MASURE'S BEAUTY. Double. Deep crimson-rose and salmon blend. Large flowers. Strong, tall, bushy plant, Free flowering and showy. Previously listed incorrectly as AMERICAN BEAUTY. 50c

MAYTIME. (Miller). Light coral and rose blend with a white center. Large flowers and clusters. Free flowering, medium size plant. Flower color varies with the season but is always lovely, and different from any other variety. \$1.00.

RAMONA. Double. Vermilion, crimson and rose blend. Very large flowers. Bushy plant. The fine translucent color is difficult to describe, perhaps approaching "cherry." The flowers are produced very freely. RAMONA apparently has some Ivy Geranium ancestry. It often makes long, somewhat trailing shoots. Since it is naturally bushy, it can easily be kept compact, if desired. 50c

ROMANY. (Miller). Double. Salmon-red and old rose blend with darker center. Large flowers in good clusters. Free flowering, medium size plant with attractively zoned foliage. ROMANY has an unusual color for geraniums, near to the color of Afterglow. A real novelty. 75c

French Type

MRS. RICHARD GLOEDE. Double. Salmon and rose blend. Large flowers. Fairly compact plant. Color is best in part shade. 50c

FANCY-LEAVED GERANIUMS

The Fancy-Leaved Geraniums are those varieties of Zonal Geraniums which have unusual colorings and markings on the leaves. The markings vary from dainty borders of white to brilliant combinations of yellow, scarlet, crimson, and brown. These varieties are grown for their foliage effects, although they do produce flowers, which in some varieties are fairly good. The white bordered Silver-Leaved type originated spontaneously before 1800, and has been repeated again and again. The greatest development of the Fancy-Leaved Geraniums occurred in the 1850's and 1860's in England, when there was extreme interest in colored leaved plants of all kinds. Peter Grieve was the leading breeder in this era, and produced a large number of very fine Tricolor Geraniums.

A great many varieties of Fancy-Leaved Geraniums existed at one time. Unfortunately most of them have been lost, or at least misplaced, for, now and then, an old one turns up again. No doubt practically all of the varieties now available date from long ago. This accounts for the uncertainty that exists about some of the names. Whenever possible, I have checked the varieties against such old descriptions as were available to me. The original forms and spellings of the names have been used in this catalog whenever it has been possible to ascertain them.

Many of the Fancy-Leaved Geraniums were originally produced for use as bedding plants for the formal, geometric beds once so popular, and they are occasionally used that way even now. They have considerable ornamental value as house plants. However, most of them are now grown as hobby plants. They are fascinating, and it is easy to become an addict. The leaves are often used in flower arrangements.

The Fancy-Leaved Geraniums are a little more difficult to grow than the ordinary ones, as is usually true for variegated plants. Varieties with the most variegation and the brightest colors are, in general, a little weaker than the less highly colored kinds. The Fancy-Leaved Geraniums require the same conditions and care as other geraniums. They tend to have rather light root systems. Good drainage is especially important. If the plants are grown in pots, the pots should not be too large for the roots to fill. The Fancy-Leaved Geraniums need good ventilation. A close, humid atmosphere is likely to bring trouble with leaf rot.

Climate and cultural conditions have a great effect on the colors of the Fancy-Leaved Geraniums. The colors are brightest when the days are sunny and the nights cool. All varieties need lots of sun. The Silver-Leaved Geraniums will get along with less sun than the others. Plants that are making slow, hard growth are usually brighter than soft, rapidly growing plants. The soil should not be very rich, but potted plants will need regular feeding. New growth is always the brightest, so that bushy plants with several growing points are the most colorful. Most of the Fancy-Leaved Geraniums should be pinched when young to induce branching and produce compact, bushy plants. Later, as the plants grow, any stems that are too strong should be pinched again. (Pinching consists of removing the growing center at the tip of the stem, by pinching, breaking, or

cutting. The smaller the piece removed, the better, but the growing center must be removed, not just the immature leaves.)

If the light intensity is low with other conditions favorable for growth, the new leaves of the Silver-Leaved and Tricolor Geraniums are likely to be umbrella shaped. In winter it is not always possible to avoid this trouble entirely. Well hardened, potbound plants give least trouble.

Silver-Leaved Geraniums

ATTRACTION. Slightly silvered, bright green leaves with an ivory border. Small, single scarlet flowers. Has a narrower and slightly paler border than Flower of Spring. It is a bushy, vigorous plant. The name may not be correct. This plant is certainly not Kinghorn's ATTRACTION, raised in 1850, which was the first Silver Tricolor and probably an ancestor of all Tricolor Geraniums, but could perhaps be Gaines' ATTRACTION dating from 1863. 50c

FLOWER OF SPRING. Slightly silvered, bright green leaves with an unusually wide irregular border of ivory. Strong growing plant. Small, single, scarlet flowers. Originated before 1860. The best ivory bordered variety. 50c

HILLS OF SNOW. Silvery green leaves with a very narrow white border. Sometimes there is a faint dark zone. Slow growing, fairly compact plant. Small, but attractive, light rose, double flowers. A neat and distinct variety. 50c

MOUNTAIN OF SNOW. Silvery green leaves with a wide, pure white border. This variety has the broadest and whitest border of all. Because of the large amount of white, the plant is not vigorous, but it is not difficult to manage. Small, single, brilliant scarlet flowers. MOUNTAIN OF SNOW is an old variety, grown at least as long ago as 1860, and has always been popular. 50c

MRS. PARKER. Silvery green leaves with a fairly wide border of white. Sometimes there is a faint dark zone. A slow growing, compact plant that is free flowering with small, but attractive, light rose, double flowers. Originated at least as long ago as 1893. Good. 50c

SILVER S. A. NUTT. Silvery green leaves bordered and frequently striped with ivory-white. Rather slow growing. Supposedly a sport of the standard S. A. Nutt, and has the same medium size, double, velvety red flowers. 75c

SPRITE. (Miller). See Dwarf Geraniums, page 27.

WILHELM LANGGUTH. Silvery green leaves bordered with white. The leaves have a faint zone. Medium size, double flowers of fine, clear vermilion. The best flowers of any of the Fancy-Leaved Geraniums. The name may be found in several forms and spellings, but the form given is believed to be the correct original name. This variety dates back to 1898. 50c

Bronze-Leaved Geraniums

ALPHA. Small, shiny, yellow-green leaves with a narrow rust-red zone. Rather small, bushy plant, with thin,

hard stems. The small, single, scarlet flowers are attractive, and very freely produced. A nice variety. Dakota appears to be identical. 50c

BRONZE BEAUTY. Scalloped, yellow-green leaves with a bright rust-red zone. Small, bushy plant. Small, single, scarlet flowers. One of the brightest Bronze-Leaved varieties, especially useful as a pot plant. There are other varieties distributed under this name; stronger growing, but not nearly so bright. 75c

JUBILEE. Yellow-green leaves with a fine, broad zone varying from rust-red to brown. The zone is broader than in any of the other Bronze-Leaved Geraniums. Tall, strong plant. Small, single, light salmon flowers. Jubilee is of English origin, presumably named to honor either the 1887 or 1897 Jubilee in the reign of Queen Victoria. The very broad, deeply colored zone makes Jubilee a showy variety. There is a much poorer variety also distributed under this name. 50c

MARECHAL MacMAHON. Yellow-green leaves with a zone of rust-red to brown, well in from the edge. Leaves are a bright green-gold under favorable conditions. Small, single, scarlet flowers. Several different varieties are found in the trade under this name. It does not seem possible that any of these varieties, including the one that I offer, can be the original MARECHAL MacMAHON. 50c

MEDALLION. (Miller). Yellow to yellow-green leaves with large red-brown blotches filling the centers. Bushy, spreading habit. Small, single, dark salmon flowers. Distinctly different from all other varieties. \$1.00.

PRINCE BISMARCK. Fairly large, nicely lobed, yellow-green leaves with a bright, rust-red zone. Compact plant. Small, single, light salmon flowers. This plant came to me from a greenhouse where it had been grown for a long time. It fits the early descriptions well, and probably it is the true variety. The name appears in old lists both as PRINCE BISMARCK and BISMARCK. 75c.

Gold-Leaved Geraniums

CLOTH OF GOLD. Yellow to yellow-green leaves without any zone. The color varies considerably, at times a clear yellow, at other times scarcely more than a yellowish-green. Bright, cool weather gives the best color. Small, single, scarlet flowers. This plant can scarcely be the original Cloth of Gold, dating from 1863 or earlier, since the original had a green blotch at the base of the leaf which is lacking in the present plant. Possibly this plant is a sport of Cloth of Gold, but could as well be CREED'S SEEDLING, YELLOW GEM, or some other similar variety. 50c

CRYSTAL PALACE GEM. Yellow to yellow-green leaves with an irregular central blotch of green. The contrast of the yellow border and the green center is very attractive. Like the other Gold-Leaved Geraniums, there is considerable variation in the intensity of the yellow. Small, single, scarlet flowers. Another old variety, going back to at least 1868. 50c

DWARF GOLD LEAF. Yellow to yellow-green leaves without any zone. As in all of the Gold-Leaved varieties, the color varies, but is generally a good yellow in this variety. Not truly a dwarf geranium, but a compact, short jointed plant. The small, single flowers are brilliant scarlet. This variety may possibly be the old English variety Gold Leaf, dating before 1860. I consider it better than Cloth of Gold. It is quite scarce at present. 50c

GOLDEN MacMAHON. Yellow to yellow-green leaves with a small, pale, rust-red zone. Varies in color, but generally is a paler yellow than the others. At times the older leaves develop pink spots, near the edges and between the veins. Single, light pink flowers. Plant compact and rather slow growing. Requires very good drainage with plenty of water and food for best results. Still very scarce. 75c

Silver Tricolor Geraniums

FAIRYLAND. (Miller). See Dwarf Geraniums, page 25.

FILIGREE. (Miller). Beautifully lobed, silvery green leaves with a wide, creamy white border, lightly zoned with pink and brown. The plant is naturally bushy, with a spreading habit, and develops into a low mound of foliage. The small, single flowers are deep salmon. The leaves of FILIGREE have an unusually wide white border, and, as a consequence, are sometimes difficult to keep in good condition during hot, dry weather. In other respects the plant is sturdy, and is reasonably easy to grow. The distinctive spreading habit, the wide white border, the nice lobing of the leaves, and the dainty zone make FILIGREE attractive, different, and desirable. \$1.00

MISS BURDETT COUTTS. Silvery green leaves with a wide, pale ivory border, brilliantly zoned with irregular splashes of rose-red and brown. The color is brightest in cool, bright weather, and softer in a warm, partly shaded location. Rather small, slow growing, bushy plant. Not difficult to grow. Small, single, scarlet flowers. This fine variety originated before 1870, and apparently is the only survivor of a once numerous class. 75c

PASTEL. (Miller). Silvery green leaves with a wide, pale ivory border, widely zoned with coral-pink splashed purplish-brown. The flowers are single, salmon-pink to coral-pink, matching the zone color. Medium size, fairly bushy plant. The wide border and soft colors give PASTEL a delicate beauty not found in other varieties. A little difficult because of the large amount of white, and should be regarded as a collector's variety. \$1.50

Golden Tricolor Geraniums

CONTRAST. Green leaves edged bright yellow with a wide zone splashed with scarlet, crimson, and brown, Small, single, scarlet flowers. Very much like Mrs. Pollock, but there are slight differences in flower color, leaf color, and leaf shape. Scarce. \$1.00

DISPLAY. (Miller). Green leaves with a wide edge of yellow, and with a zone of scarlet, crimson, and brown. The golden edge is wider than on any other Golden Tricolor. The scalloped leaves are large and

flat. The zone is a little paler than in Mrs. Pollock, but the proportion of scarlet is greater. Small, single, scarlet flowers. DISPLAY is not a strong grower, so that time and care are required to grow a good specimen. Early and frequent pinching, and frequent light feeding are recommended. When well grown, I consider this the most beautiful tricolor. \$1.25

ELF. (Miller). See Dwarf Geraniums, page 24.

HAPPY THOUGHT. Bright green leaves with a large, irregular, light yellow to ivory center, faintly zoned with irregular splashes of brown and orange. Particularly healthy, compact plant. Small, single, vermilion flowers. Originated before 1876. 50c

JANE MAXWELL. Green leaves edged bright yellow with a strongly colored brown zone splashed with red. Small, single, scarlet flowers. The yellow edging is generally narrower than in Mrs. POLLOCK, so that there is more brown and less red in the zone. 75c

MRS. COX. Green leaves edged bright yellow with a very wide zone splashed scarlet, crimson and brown. The zone is broader, and nearer the edge than in Mrs. Pollock, and the leaves are less lobed. Fairly tall plant that grows quite easily. Small, single, light salmon flowers. Very colorful under all conditions, even in hot weather. One of the rarest of the Fancy-Leaved Geraniums. 75c

MRS. POLLOCK (single). Green leaves edged bright yellow with a wide zone splashed scarlet, crimson and brown. Nicely lobed leaves. Small, single, orange-scarlet flowers. Created in 1858 by Peter Grieve, and has always been considered one of his best. Easily grown. Unfortunately there is also an inferior variety offered under this name. 60c

MRS. POLLOCK (double). Green leaves edged bright yellow with a wide zone splashed scarlet, crimson and brown. Small, double, orange-scarlet flowers. Except for the double flowers, this is essentially the same as the original Mrs. POLLOCK. 60c.

NUGGET. (Miller). See Dwarf Geraniums, page 25.

PINK HAPPY THOUGHT. Bright green leaves with a large, irregular, light yellow to ivory center, faintly zoned with splashes of brown and orange. Small, single light rose-pink flowers. Much like the original HAPPY THOUGHT in foliage, but has more slender stems and an almost trailing habit. Flowers very freely. 60c

SKIES OF ITALY. Green leaves edged yellow with a strong brown zone splashed red. Handsome, sharply lobed leaves. Small, single, scarlet flowers. A good specimen of Skies of Italy is very rich and brilliant. Young plants are not so colorful, having a narrower yellow edge and much less red. Plants should be kept quite potbound, with strong growing shoots pinched or cut back to encourage short, hard, side growth. Light feedings of complete fertilizer intensify the color. Skies of Italy is a strong grower. 50c

DWARF GERANIUMS

The Dwarf Geraniums are miniature Zonal Geraniums. They are not just semi-dwarf or compact kinds, but actually are so small as to be very different, mature plants rarely being more than a few inches high.

The Dwarf Geraniums are usually grown as pot plants. They are among the best and most interesting flowering plants for a sunny window. Like all geraniums, they need sun and will not flower unless they have enough. Most of them flower heavily. They are all naturally bushy plants, and seldom need pinching or pruning.

Suggestions for the care of Dwarf Geraniums are sent with each order. They are not quite so easy to grow as ordinary geraniums. KLEINER LIEBLING, MADAME FOURNIER, and PIXIE are the easiest, and require only reasonable care. PERKY, RUFFLES, and WHITECAP are probably just as easy. BLACK VESUVIUS and IMP are very small and slow, with light root systems, and so are a little more difficult. PIGMY grows easily and rapidly if conditions are right, but it will not stand much neglect. The Fancy-Leaved Dwarfs, ELF, FAIRYLAND, and SPRITE, are fairly difficult, and should be regarded as collectors' plants. Sprite is the easiest; ELF the most difficult.

The sizes given in the descriptions are for mature plants, several years old. The plants shipped are younger and, of course, smaller. They are well established plants from $2\frac{1}{2}$ inch pots.

BLACK VESUVIUS. Very dwarf plant, with small, dark leaves. In full sun, the leaves are dark purple-green to almost black, with a darker zone, which scarcely shows, since the leaves are so dark themselves. It is the darkest of the Dwarf Geraniums. The plant is naturally bushy and compact. It grows very slowly, and will remain not more than a few inches high for a long time. The single, orange-scarlet flowers are surprisingly large for the diminutive plant, and are freely produced in nice clusters held above the foliage. Generally grown as a pot plant. At least 50 years old, but will always be scarce, since it grows so slowly. \$1.00

DANCER. (Miller). Semi-dwarf. Single. Salmon, lighter at the edges except under very sunny conditions. Exceptionally large flowers and clusters for a semi-dwarf variety, and very free flowering. The handsome leaves are black-green with a black zone. Size of the plant and leaves is greatly dependent on the amount of root room. In a small pot it will remain a dwarf, but in a large pot it will be almost as large as some non-dwarf varieties, but bushier. In a 4-inch pot it grows to 7 or 8 inches height and spread in a year, and grows slowly thereafter. Dancer is very satisfactory under all conditions from a small pot to open ground bedding. \$1.00.

ELF. (Miller). Golden Tricolor. Small, dark, gray-green leaves with a wide yellow border nicely zoned with irregular splashes of scarlet. ELF is a true dwarf, bushy, slow growing, and never more than a few inches high. The small, single flowers are scarlet. ELF, like FAIRY-LAND and SPRITE, has an especial appeal to collectors. \$2.50

EMMA HOSSLER. Semi-dwarf. Double. Light rosepink with white center. Very free flowering with large flowers and clusters. The bushy, green-leaved plant is smaller than the ordinary geraniums, but larger and less bushy than the true dwarf varieties. Easily grown and a fine pot plant. 75c

FAIRYLAND. (Miller). Silver Tricolor. Small, dark grayish-green leaves with a wide pale ivory border beautifully zoned with irregular splashes of rose-red. In winter, with plenty of sun and low night temperatures, the ivory border becomes pink or rose-red with the zone deeper in color. The plant is a true dwarf, bushy, very slow growing, and never more than a few inches high. The small single flowers are light scarlet. FAIRYLAND is the first of its kind, a beautiful and striking little plant which will interest all collectors of rare geraniums. \$2.50

IMP. (Miller). Very dwarf plant with dark leaves and salmon flowers. In full sun the small leaves are blackgreen with a black zone. The plant is naturally bushy and compact and about the size of BLACK VESUVIUS. It grows very slowly and stays so small that it can be kept in a small pot for years. The single salmon flowers are surprisingly large for the plant and are produced very freely in nice clusters. IMP is an especially good dwarf for the winter window garden. \$1.00

KLEINER LIEBLING (LITTLE DARLING). Semidwarf. Small zoneless green leaves. Naturally bushy and compact. Fast grower, becoming 12 to 15 inches tall. Small, single, rose flowers with a little white in the center are produced fairly freely. An old variety. 75c

MADAME FOURNIER. Semi-dwarf. Small, dark leaves with a darker zone. The plant is naturally bushy and compact, but grows easily, and in time becomes 12 to 15 inches high. Small, single, scarlet flowers produced freely. Another old variety. 75c

MINX. (Miller). Double. Red and purple-crimson blend. Beautifully formed, large flowers in many big clusters held well above the foliage. Color varies from red, through ruby, to purple-crimson in different parts of the flower, and depends somewhat on cultural conditions. The blackish-green leaves are nicely lobed and a little ruffled at the margins. The very bushy plant eventually gets 10 or 12 inches tall, but flowers so heavily that growth is rather slow. \$1.00

MISCHIEF. (Miller). See page 28.

MR. EVERAARTS. Semi-dwarf. Double. Rose with a white center. Very free flowering with large flowers and clusters. Very similar to EMMA HOSSLER except for the darker flowers. Good. 75c

NUGGET. (Miller.) Golden tricolor. Olive green leaves with a wide, clear yellow border. The yellow color is held well even on the old leaves. Under very cool, sunny conditions there is a brown zone, but little or no zone under usual conditions. The plant is small and bushy. The small, single, light shrimp flowers are rarely seen. Like the other Fancy-Leaved Dwarf Geraniums, Nugget is slow growing and a little difficult, and should be regarded as a collector's plant. It is very different from any other variety. \$2.50.

PERKY. (Miller). Dwarf plant with dark leaves and red flowers with white centers. The single flowers are very large for the size of the plant; the red clear and bright; the white center distinct; the form good; and the flowers last well. The clusters are large and freely produced. Established plants with a reasonable amount of sun flower continuously. The leaves are dark olivegreen. The plant is bushy and compact, but sturdy, and eventually will reach a height of 8 to 10 inches. I consider Perky one of the very best of the Dwarf Geraniums. \$1.50

PIGMY. Tiny plant with miniature, light green, zoned leaves, and a profusion of small, double flowers of a cheerful red. In appearance it is the smallest of the Zonal Geraniums. PIGMY grows considerably faster than BLACK VESUVIUS, but the ultimate size is about the same, seldom exceeding 6 inches. It is naturally densely branched, bushy and spreading in habit. Even very small plants are bushy and flower freely. In a sunny window, the pretty flowers are produced in constant succession. I consider PIGMY the most interesting and distinctive of the dwarfs. 75c

PIXIE. (Miller). Dwarf, bushy plant with dark leaves and light salmon-pink flowers. The small, black-zoned leaves are dark olive-green to dark purple-green, or sometimes almost black, depending on exposure. The plant is truly dwarf, smaller and more compact than MADAME FOURNIER. It may eventually reach 10 or 12 inches in several years, but for a long time will be only a few inches high. It branches freely, with a spreading habit. The single, light salmon flowers are of fair size in good clusters, freely produced. PIXIE is very popular. 75c

RED SPIDER. (Miller) See page 29.

ROCKET. (Miller). Semi-dwarf. Double. Deep velvety vermilion, often with smoky tones. Good size flowers and clusters on a free flowering, free branching plant. Leaves are blackish green with some zone. An easily grown variety for pot culture, or for outdoor use in climates suitable to the semi-dwarfs. \$1.00.

RUFFLES. (Miller). Very dwarf plant with dark leaves and semi-double, salmon flowers. The flowers are of good size, with some of the petals ruffled. The clusters are small to medium and held close to the foliage. The small leaves are dark olive-green to blackish green with a darker zone. The plant is very bushy and compact, slow growing, and never more than a few inches high. Free flowering at all seasons. \$1.00

SMALL FORTUNE. (Miller). See New Geraniums for 1958, page 7.

SPARKLE. (Miller). Semi-dwarf. Double. Bright, cheerful red. Large flowers in good clusters held well above the foliage. Very free flowering, small, bushy plant, with small, blackish-green leaves. Smaller and bushier than ordinary geraniums, but not so small as most of the dwarf varieties. Easily grown. Sparkle is good for pots, window boxes, or garden. The color is just the red that is most looked for in geraniums, but seldom found, and is well set off by the handsome dark leaves. 75c

SPRITE. (Miller). Silver-Leaved. Small, dark grayishgreen leaves with a wide ivory-white border. In winter the ivory border is flushed with coral, particularly on the newer leaves. The plant is truly dwarf, slow growing, and bushy. The ultimate height is probably around 8 or 10 inches, but it takes several years to reach that size. The single, salmon-coral flowers are freely produced, and go well with the foliage colors. I believe that Sprite is the first Dwarf Fancy-Leaved Geranium ever produced. It is a beautiful little plant and a real collector's gem. \$1.50.

TWINKLE. (Miller). Semi-dwarf. Double. Coralrose. Flowers of medium size produced freely in clusters held close to the foliage. Small, bushy plant, with small, dark olive-green to blackish-green leaves. Smaller than ordinary geraniums, but not so small as most of the dwarf varieties. Twinkle is equally good in pots, window boxes or gardens. 75c

VARIEGATED KLEINER LIEBLING. (Miller). Silver-Leaved. Small, crinkled, grayish green leaves with pure white borders. Small, single, rose flowers with a little white in the centers. A sport of KLEINER LIEBLING, with smaller, variegated leaves, smaller size, and slower growth, but easy to grow. Much admired by all who have seen it. \$1.00

WHITECAP. (Miller). Dwarf plant with dark leaves and white flowers. The single flowers are pure white with the edges of the petals waved. They are of medium size, in large clusters that last well. The leaves are olive-green without any zone. The plant is bushy and compact, but grows more strongly than most of the Dwarf Geraniums, and in time may become 12 inches high. WHITECAP is very free flowering. \$1.00

The Dwarf Geraniums do not ship quite so well as other geraniums. This is particularly true for the Fancy-Leaved Dwarf varieties. Although Air Parcel Post is expensive, it may be justified for long distance shipment of the higher priced varieties.

Air Parcel Post

Rates are to points east of the Mississippi River, and include Insurance and Special Delivery.

				\$2.25
5 or	6	plants		3.85
		plants	***************************************	4.65

Add 80c to the 10 rate for each 2 plants above 10.

Count each plant of ELF, FAIRYLAND, NUGGET, or SPRITE as 2 plants in figuring Air Parcel Post. These varieties are shipped in the pots in which they are grown. This doubles the weight.

Please read inside front cover before ordering.

ODD GERANIUMS

Bird's Egg Geraniums

In these geraniums there are small, rose-red spots on the petals, particularly the lower ones. The group apparently originated around 1900. There were a considerable number of named varieties, quite possibly including the ones listed below, for which the original names seem to have been lost. They were at one time extensively grown, but now are almost unknown, with stock very scarce.

DOUBLE PINK BIRD'S EGG. Double. Orchid-pink with some white in the center, all petals, but particularly the lower ones, spotted with small, rose-red dots. Large flowers in very large clusters. Free flowering, large plant. The spots are not so conspicuous in this variety as in the others, but the flowers are really good. 50c

MRS. J. J. KNIGHT. Single. Very pale pink with all petals, but particularly the lower ones, heavily spotted with small rose dots. Very free flowering with good clusters. Slow growing, compact plant. Probably the best Bird's Egg Geranium. Rare. 75c

SINGLE PINK BIRD'S EGG. Single. Rose with some white in the center, all petals, but particularly the lower ones, conspicuously spotted with small rose-red dots. Medium size flowers. Free flowering, compact plant. 75c

Cactus-Flowered Geraniums

These geraniums have narrow, rolled, and twisted petals, of the type found in the Cactus Dahlias, and so are called Cactus Flowered. They probably originated about 1900. There were once a considerable number of varieties, both single and double, but most of them are no longer grown in this country. Lately there has been a revival of interest, and a number of new varieties have been produced. The Cactus Flowered Geraniums are sometimes called Poinsettia Geraniums from the names of some of the older varieties.

DOUBLE POINSETTIA. Double. Deep red with narrow, rolled, and twisted petals. Large flowers. Slender stemmed plant that needs pinching to keep it compact. Flowers very freely. 50c

MISCHIEF. (Miller). Double. Orange-scarlet with narrow, rolled and twisted petals. Flowers well with medium size clusters on short stalks. Leaves small, dark olive to blackish green or maroon, depending on cultural conditions. Semi-dwarf habit, but not so small as the true dwarfs. An easily grown novelty that is decidedly different. 75c

MORNING STAR. Double. Salmon-apricot with narrow, rolled, and twisted petals. Medium to large plant flowers well. An attractive color. 75c

NOEL. Double. White with narrow, rolled, and twisted petals. Fairly large flowers of good substance. Strong, bushy plant that flowers well. This is the strongest growing of the Cactus Flowered Geraniums. The petals of NOEL are broader than those of PUFF. 50c

PINK POINSETTIA. Double. Light orchid-pink with a little white in the center. Narrow, rolled, and twisted petals. Compact plant with lots of flowers. 50c

PUFF. (Miller). Double. White with narrow, rolled, and twisted petals. Good size flowers in medium clusters. The petals are very narrow, and the flowers are not too full, desirable features in this class. Small, compact, bushy plant that flowers freely. Ideal for a pot plant. 75c

RED SPIDER. (Miller). Single. Intense scarlet with narrow, rolled petals. The free flowering plant has dark olive-green to blackish green leaves. Semi-dwarf habit, but considerably larger than the true dwarfs. An easily grown and unusual geranium. 60c

SILVER STAR. (Miller) Single. White with narrow, somewhat rolled petals. The petals are less rolled and wider than Puff. Small, compact, bushy, free flowering plant. Silver Star is an attractive novelty. 50c

SOUTHERN CROSS. Double. Salmon-coral with narrow, rolled, and twisted petals. Unusually large flowers and clusters for this group. Medium to large plant flowers freely. 75c

Carnation-Flowered Geraniums

In these geraniums the margins of the petals are toothed, so that the flowers somewhat resemble small carnations, Sweet Williams, and pinks.

CERISE CARNATION. Double. Cerise to light crimson, the edge of each petal sharply toothed. Medium size flowers in large clusters. Free flowering. The flowers are the most carnation-like of all in this group. Recommended. 50c

FIAT QUEEN. See page 12.

JEANNE. Single. Salmon, the edges of each petal sharply toothed. Small flowers in good clusters. Free flowering, bushy plant. Interesting. Sometimes called SWEET WILLIAM. 50c

MADAME THIBAUT. Single. White, changing to pink, the edges of each petal sharply toothed. The flowers open pure white with a few rose-red veins at the base of the upper petals, and gradually change to pale pink, pink, or rose. Small flowers in good clusters. Odd and interesting. 50c

PRINCESS FIAT. See page 10.

ROYAL FIAT. See page 10.

New Life Geraniums

This group originated with the introduction of the variety Vesuvius in England in 1868. Vesuvius soon produced a double flowered sport, called Wonderful. Sometime prior to 1884 Vesuvius produced another sport that had flaked or variegated flowers. This was called New Life, and is the most interesting of the group. New Life soon sported again, and still does fairly frequently, to the form that I call Phlox New Life. This may have had an earlier name, but so far I have not been able to discover it. About 1892, Wonderful, the double flowered sport of Vesuvius, produced a sport with variegated flowers, called Double New Life. Although the flowers are quite different in each, the plants are all the same, healthy and vigorous, but bushy and compact, and very free flowering. All do well both as pot plants and in the garden.

DOUBLE NEW LIFE. Double. Scarlet and white flowers, some petals all scarlet, some all white or pinkish, others part scarlet, part white. Small flowers with many narrow petals. Very free flowering, compact plant. Frequently listed as STARS AND STRIPES. 50c

NEW LIFE. Single. Scarlet flecked and striped with white. Occasional flowers may be all scarlet, or all white with a pink center, or part of a flower may be of one kind and part another. No two are alike. The flowers are of nice round form, small to medium in size, and freely produced in nice clusters that last a long time. The plant is compact and bushy, and easily grown. This very interesting old time variety has become very scarce. 75c

PHLOX NEW LIFE. Single. White, sometimes slightly flushed pink, with soft coral eye in the center. Small to medium flowers of good form in nice clusters that last well. The plant is of the same compact, free flowering habit as the others. This is a sport of New LIFE, the extreme extension of the "Phlox" pattern often seen in parts of the New LIFE flowers. It is of interest not only for its origin, but also as an attractive flowering geranium. 50c

VESUVIUS. Single. Scarlet. Small to medium flowers in nice clusters that last well. Plant of same habit as the others. This variety occasionally appears as a "reversion" from any of the others. The stock offered here is propagated from a "reversion" of Double New Life. Vesuvius is of particular interest as the original variety from which this group developed, but it is also a useful scarlet flowered variety when a compact, bushy plant is desired. It is not the same as the dwarf variety Black Vesuvius. 50c

Rosebud Geraniums

In these geraniums the flowers never open wide, so that they resemble clusters of tiny, half-opened roses. They are all very double flowers, with the stamens and pistils replaced with many small petals. Quite likely they are old varieties for which the original names have been lost.

APPLE BLOSSOM ROSEBUD. Very double. White with distinct rose-red edging, green center, and some green stripes. Mature flowers vary from rosebud form to almost fully open form. Medium size flowers last a long time. Strong plant. Very unusual. Flowers well. 50c

PINK ROSEBUD. Very double. Rose-red to cerise-red on the inside of the petals, considerably lighter, sometimes light pink, on the outside. Mature flowers hold the rosebud form. Strong plant. I now offer a selected strain that flowers very freely, even when small. 50c

RED ROSEBUD. Very double. Red, possibly slightly scarlet. Mature flowers are more open than rosebuds, but still not fully expanded. Flowers are small, neat, and of fine substance. Medium size plant. Flowers freely, and is interesting and attractive. Also called SCARLET ROSEBUD. 50c

Miscellaneous Geraniums

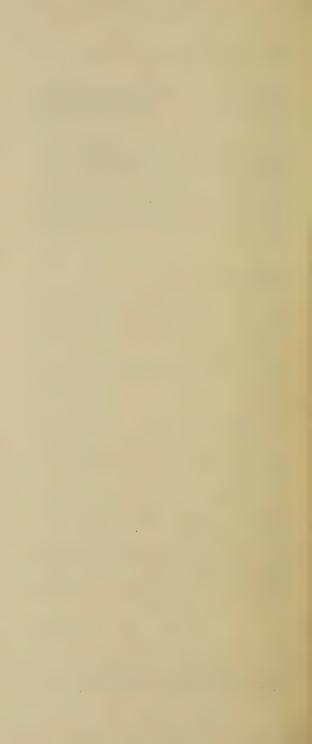
DARK BEAUTY. Rather small, nicely lobed, dark green leaves with a large black blotch filling the center. Bushy, easily grown plant with some almost trailing stems. Medium size, rather narrow petaled, single, orange-salmon flowers, which are attractive and freely produced. Supposedly a *Pelargonium frutetorum* form. Very interesting. 50c.

DISTINCTION. Small, somewhat yellow-green leaves, toothed and ruffled on the edge, with a distinct, narrow, dark zone close to the edge. Compact, bushy plant. Small, single, cherry-red flowers. This old variety is different from all others. Sometimes known as ONE-IN-A-RING. 50c

MR. WREN. Single. Brilliant light red, each petal distinctly, but irregularly, bordered with white. The strong, large plant flowers less freely than the average geranium. Although the flowers are small, they are so strikingly different that MR. WREN is worth while to anyone looking for a real novelty. 50c.

TWEEDLEDEE. (Miller). A hybrid between the Dwarf Geranium, BLACK VESUVIUS, and the species, Pelargonium acetosum. The bushy plants are small to medium in size, with thin, hard stems. New growth is upright, but older stems often arch under their own weight. The small, shiny leaves are dark olive-green to blackish-green, with a darker zone, and are oddly lobed and a little folded. The large flowers are single with narrow, light salmon petals, and are freely produced in small clusters. Tweedledee is easily grown. A distinct novelty. 75c.

TWEEDLEDUM. (Miller). Practically the same as Tweedledee except that it has dark salmon flowers. 75c.

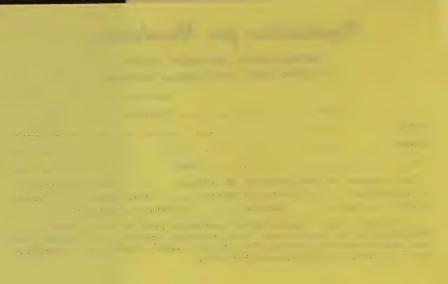


Application for Membership

INTERNATIONAL GERANIUM SOCIETY 1413 Bluff Drive, Santa Barbara, California

	HOBBYIST.		
DATE	COMMERCIAL		
NAME			
CITY	STATE		
(P. domesticum)Ivy-leaved (P.	(P. hortorum)Lady Washingtons pelatum)Scented-leavedFancy- Contributing to Magazine		

Membership dues: Regular, \$3.00; Contributing, \$5.00; Sustaining, \$10.00 Membership entitles you to receipt of all publications, answers to any questions you may have in relation to geraniums from the best available experts, and full participation in all conventions and meetings of the Society.



Sales are retail only. No discounts are allowed to the trade or on quantity.

I am always glad to supply plants for propagating stock to other growers at retail prices, but I reserve the right to limit quantity on any variety, as is sometimes necessary to maintain adequate stocks for my regular retail trade.

All plants are from 21/2 inch pots. Cuttings cannot be supplied.

HOLMES C. MILLER
280 WEST PORTOLA AVENUE
LOS ALTOS
CALIFORNIA

GERANIUMS



SCHEDULE OF AMOUNTS TO INCLUDE FOR POSTAGE

These rates are for Insured Parcel Post, Special Handling. Such shipments are usually best and are recommended. Special Delivery is well worth the cost to addresses where the service is available, and may cut transit time by a full day. If Special Delivery is wanted, add 25c to the rates given.

California, Oregon, Washington, Arizona, Idaho, Nevada, Utah					
Other States West of the Mississippi					
States East of the Mississippi Number of Plants					
5 1.24 6 1.35 7 1.45 8 1.55 9 1.65 10 1.76 11 1.86 12 1.96 13 2.07 14 2.17 15 2.27 16 2.37 17 2.48 18 2.58 19 2.68 20 2.78 21 2.89 22 2.99 23 3.09	1.10	94 98 101 1.05 1.08 1.11 1.15 1.18 1.21 1.25 1.28 1.31 1.31 1.35 1.38 1.41 1.45 1.48			
27	2.91 3.00 3.08 3.16	1.61			

If your order is for less than 4 plants, include postage for 4 plants.

If your order is for more than 30 plants it will be shipped in more than one package. The schedule can be used to determine the postage for the separate packages.

The weight of the plants and the packing material varies a little, so that the above schedule is not exact, but averages approximately the actual shipping costs. The use of the table enables the purchaser to know in advance the exact cost of the delivered plants, and also eliminates much correspondence and many small refunds and collections.

(Schedule subject to change if there are changes in the postal rates.)

